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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/058,411	01/30/2002	Koichiro Kawaguchi	01272.020504	4733
5514	7590	02/01/2005		
FITZPATRICK CELLA HARPER & SCINTO 30 ROCKEFELLER PLAZA NEW YORK, NY 10112			EXAMINER COLILLA, DANIEL JAMES	
			ART UNIT 2854	PAPER NUMBER

DATE MAILED: 02/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n No.

10/058,411

Applicant(s)

KAWAGUCHI ET AL.

Examiner

Daniel J. Colilla

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-- The MAILING DATE of this c mmunicati n appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4 and 6-15 is/are allowed.
- 6) ☒ Claim(s) 16-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 January 2002 and 01 November 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 16-19 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 16, the terms “a plurality of the printing” and “a plurality of the transportation” is vague and indefinite. It is not clear what “a plurality of the printing” and “a plurality of the transportation” actually include. In other words, what are the units of printing and the transportation that make up a plurality of printing and transportation.

In claims 16 and 19, the phrase, “by turns” in lines 6 and 4 respectively is vague and indefinite. It is not clear what applicant intends to mean by this phrase.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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To the extent that claims 16 and 19 can be understood, in view of the above 112, second paragraph rejection, the following prior art rejection appears to be appropriate.

4. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Miyazaki et al.

Miyazaki et al. discloses a printing method performed by an apparatus (Figure 1 of Miyazaki et al.) including the steps transporting a printing medium (transporting means not shown) (Miyazaki, col. 5, lines 11-12), moving a carriage without printing (and thus vibrating the transporting means) (Miyazaki et al. col. 5, lines 17-18) and then moving the carriage with printing (Miyazaki et al., col. 5, lines 18-20). It is noted that the phrase, "by turns" has not been addressed because it is not known to the examiner what this means. Additionally, applicant has not defined what a "close" predetermined range is either in the claim or in the specification, therefore, the predetermined range is broadly taken to mean any distance at which the back end of the print medium is located with respect to the transporting means.

5. Claim 19 is rejected under 35 U.S.C. 102(e) as being anticipated by Matsumoto.

Matsumoto discloses a printing apparatus including a carriage 404, a carriage motor 407, a print head 402, a transportation roller 302 and a transportation roller motor 309. The carriage travels in a direction crossing a direction that the print medium P is travels as shown in Figures 1 and 3 of Matsumoto. It is noted that the phrase, "by turns" has not been addressed because it is not known to the examiner what this means. Since the printhead prints in swaths one line at a time, the transportation roller 302 transports

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the print medium a distance that is shorter than the print medium. Note that the remainder of the claim beginning with “wherein, at the time” is a functional recitation of how the apparatus is to be used. The above mentioned structure is capable of carrying out these recited functions and therefore these limitations are met.

6. Claims 20-22 are rejected under 35 U.S.C. 102(e) as being anticipated by Uchida (US 2001/0040616).

With respect to claims 20-22, Uchida discloses a printing apparatus with a printhead 7, a transportation roller 4 and a carriage 8. Uchida further discloses a pinch roller 5 for pinching a print medium 3a against transportation roller 4 and a pinch roller holder 5a that rotatably supports the pinch roller 5. The pinch roller holder is moved by holder moving means 19 as shown in Figures 2-3 of Uchida. Although Uchida does not explicitly state that the holder moving means is a vibrating means, since Uchida discloses all the structure, that is recited in the claim, used for vibrating the transportation roller 4 it must inherently also vibrate the transportation roller 4.

7. Claims 20 and 23 are rejected under 35 U.S.C. 102(b) as being anticipated by Kiyohara et al. (US 5,867,196).

With respect to claims 20 and 23, Kiyohara et al. discloses a printing apparatus with a printhead 27, a transportation roller 13 and a carriage 26. Kiyohara et al. further discloses a pressure plate 4 that supports the print medium, a sheet feeding roller 9, a spring 5 which pressures the print medium on the feeding roller 9, and a pressure releasing means 7 for placing a space between the pressure plate 4 and the feeding roller

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9 as shown in Figures 5-6 of Kiyohara et al. Although Kiyohara et al. does not explicitly state that the pressure releasing means is a vibrating means, since Kiyohara et al. discloses all the structure, that is recited in the claim, used for vibrating the transportation roller 13 it must inherently also vibrate the transportation roller 13.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Miyazaki et al. as applied to claim 16 above, and further in view of Matsushashi.

Miyazaki et al. discloses the claimed method except that it is not known to the examiner what type of transportation means is used in the Miyazaki et al. patent. However, Matsushashi teaches that a printer transporting means that includes movable rollers 12 and 34 for moving and stopping the print medium T. These rollers are held in a stable stopped position when the printhead 5 scans across the print medium. The roller 34 is biased against the roller 12 by spring 36 and the roller 12 is driven by motor 18 (Matsushashi, col. 7, lines 13-14). It would have been obvious to combine the teaching of Matsushashi with the method disclosed by Miyazaki et al. for the advantage of the ink capturing means that captures excess ink that misses the print medium T and prevents the printer from becoming soiled with ink (Matsushashi, col. 2, lines 29-37).

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10. Claims 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Furukawa et al. (JP 55-067467) in view of Uchida (US 2001/0040616).

With respect to claim 20, Furukawa et al. discloses the claimed printing apparatus except that it is not known to the examiner if he discloses a carriage. Furukawa et al. discloses a printing apparatus including a print head 1,2, a transportation roller 21, (since the printhead prints in swaths one line at a time, the transportation roller 21 transports the print medium a distance that is shorter than the print medium) and a vibrating means 20 that vibrates the transportation roller 21 (see second sentence of the Constitution portion of the English abstract). It is noted that the last two paragraphs of this claim are “wherein” statements that recite how the structure is intended to be used. Furukawa et al. discloses all the necessary structure for the printing apparatus to be operated in this recited manner. Uchida discloses a printing apparatus with a carriage 8. It would have been obvious to combine the teaching of Uchida with the printing apparatus disclosed by Furukawa et al. for the advantage of a smaller print head size than a full, pagewidth printhead and thus a smaller cost than a full pagewidth printhead.

With respect to claim 21, Figure 4 of Fukuwara et al. shows a pinch roller 23 that prints the medium 10 with the transportation roller 21.

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kagami et al. is cited to show another example of a printing apparatus with a vibrating means for vibrating a transportation roller.

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Allowable Subject Matter

12. Claims 1-4 and 6-15 are allowed.

Response to Arguments

13. Applicant's arguments filed on 11/1/04 have been fully considered but they are not persuasive of any error in the above rejection.

With respect to claim 16, the bulk of the amendment is a functional recitation of how the structure recited in the claims is intended to be used. Miyazaki et al. discloses the recited structure and is capable of carrying out the recited functions. Since this is an apparatus claim, the method of how the apparatus is used does not distinguish from the prior art unless the prior art is not capable of carrying out the method.

A similar argument is applied to claim 19 and the Matsumoto reference.

With respect to newly added claims 20-23, a new rejection has been made above. In these claims, applicant is reciting structure that is common to many printers and also calling it a vibrating means. There does not appear to be any additional disclosure in the specification as to how this structure produces vibrations. Thus it is inferred that the vibrations are produced from the normal operation and movements of the structure disclosed and recited in the claims.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

15. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dan Colilla whose telephone number is (571)272-2157. The examiner can normally be reached Mon.-Thur. between 7:30 am and 6:00 pm. Faxes regarding this application can be sent to (703)872 - 9306.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Hirshfeld can be reached at (571)272-2168. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

January 27, 2005



Daniel J. Colilla
Primary Examiner
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